

## APPENDIX B

# SAMPLE GUNNER'S QUALIFICATION TEST

### B-1. USE OF TEST

a. This appendix presents the test that evaluates the 13B (0811) soldier (Marine) in the performance of the principal duties of the gunner. This test applies to all weapon systems and has the following purposes:

(1) The tasks in this test should be used as a training tool. The soldier should practice each task under close supervision to acquire the degree of proficiency required by the standards stated in this test.

(2) This test can bolster the esprit and motivation of the soldier through recognition of individual proficiency. The Artillery clasp for the marksmanship badge will be awarded upon completion of this test (see AR 672-5-1).

b. This test will be given at least semiannually.

### B-2. STANDARDS OF PRECISION

The soldier will be required to perform the tasks in accordance with the following standards:

a. Settings must be exact.

b. Bubbles in leveling vials must be centered exactly.

c. The cross hair of the reticle pattern on the panoramic telescope must be aligned exactly on the left edge of the aiming post, on the 0 line of the collimator (or offset correctly to counter the effects of displacement), center mass of the compass or reflector of the aiming circle, or on the top left edge of the distant aiming point.

d. The final motion of the elevating handwheel must always be in the direction that raises the cannon tube.

e. Azimuth knobs must be rotated so as to approach the aiming point from left to right.

f. The appropriate deflection correction must be set on the gunner's aid.

g. Correct terms must be used.

h. Correct hand and arm signals must be used.

i. If any questions arise, refer to the appropriate technical manual and then to FM 6-50.

### B-3. ASSISTANCE

The soldier will not receive assistance on the individual tasks but will be provided an assistant on those tasks which require one. If the soldier fails any task because of the fault of the assistant, that task will be retested.

### B-4. TASK SCORING

Scoring will be in accordance with the standards for each task. A NO-GO will be given if any of the standards of precision (B-2) or the standards of a specific task are not met, and 0 points will be awarded. If the soldier receives all GO ratings for the standards, the score for the task will depend on the speed of execution.

### B-5. QUALIFICATION SCORES

Scores determining the qualification status of the gunner are shown on Table B-1.

Table B-1. Gunner qualification scores

WEAPON						
Classification	M101A1	M102	M119A1	M198	M109A2-A5	M109A6
SCORE						
Expert Gunner	92-84	92-84	72-64	84-75	92-84	92-84
Gunner First Class	83-76	83-76	63-57	74-67	83-76	83-76
Gunner Second Class	75-66	75-66	56-50	66-58	75-66	75-66
Unqualified	65-0	65-0	49-0	57-0	65-0	65-0

## B-6. EQUIPMENT, PERSONNEL, AND SITE REQUIREMENTS

a. Successful administration of the test is enhanced by efficient organization of the test site. The test site will consist of the following:

- (1) An in-briefing station.
- (2) A chief examiner.
- (3) An examiner for each station and an assistant if required.
- (4) Six howitzers in the firing position with BIL.
- (5) An aiming circle with communications.

(6) Two direct fire targets, 600 meters in front of the test site and 50 meters apart.

(7) At least one distant aiming point.

b. Soldiers will use the round-robin method to move from station to station. The examiner will be the same for each station. Each examiner will have a clip board and stop watch.

c. The chief examiner will brief each soldier on the test site and what tasks are on each howitzer. He will explain the scoring system and answer any questions.

d. A test outline is shown in Table B-2. A sample grading sheet is shown in Table B-3.

Table B-2. Test outline

TASK NUMBER	SUBJECT	ELEMENTS	POINTS PER ELEMENT	MAXIMUM CREDIT
1	Laying the Cannon for Initial Direction of Fire Using the Aiming Circle	1	4	4
2	Laying the Cannon for Initial Direction of Fire Using the M2 Compass	1	4	4
3	Laying the Cannon for Initial Direction of Fire Using a Distant Aiming Point	1	4	4
4	Laying Another Cannon Reciprocally	1	4	4
5	Refer the Piece	1	4	4
6	Aligning the Collimator	1	4	4
7	Aligning the Aiming Post	1	4	4
8	Boresighting the Howitzer	5	4	20
9	Verifying Boresight with the M140/M139	1	4	4
10	Conducting Fire Missions	5	4	20
11	Direct Fire	4	4	16
12	Laying a Howitzer for Quadrant with the Range Quadrant	1	4	4
13	Measuring the Quadrant with the Range Quadrant	1	4	4
14	Initializing the AFCS	1	4	4
15	Prepare to Fire Using the AFCS	1	4	4
16	Conduct Fire Missions Using the AFCS	1	4	4
17	Perform Direct Fire Using AFCS	1	4	4
Total Points Possible				112

Table B-3. Recommended grading sheet

GUNNER'S NAME		SECTION	UNIT
SECTION CHIEF		DATE	WEAPON SYSTEM
TASK		POINTS ACHIEVED	
TASK 1	Laying Using Aiming Circle	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 2	Laying Using M2 Compass	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 3	Laying Using DAP	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 4	Laying Reciprocally	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 5	Refer the Piece	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 6	Aligning the Collimator	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 7	Aligning the Aiming Post	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 8A	Boresight Pantel with Testing Target	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 8B	Boresight Elbow Telescope With Testing Target	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 8C	Boresight Pantel Using a DAP	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 8D	Boresight Elbow Telescope Using a DAP	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 8E	Boresight Pantel using Standard Angle	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 9	Verifying Boresight with the M140/M139 Alignment Device	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 10A	Fire Mission	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 10B	Fire Mission	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 10C	Fire Mission	NO-GO = 0 POINTS TIME____ = ____ POINTS	

Table B-3. Recommended grading sheet (continued)

GUNNER'S NAME		SECTION	UNIT
SECTION CHIEF		DATE	WEAPON SYSTEM
TASK		POINTS ACHIEVED	
TASK 10D	Fire mission	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 10E	Fire mission	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 11A	Direct Fire	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 11B	Direct Fire	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 11C	Direct Fire	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 11D	Direct Fire	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 12	Laying the Howitzer for Quadrant with the Range Quadrant	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 13	Measure the Quadrant with a Range Quadrant	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 14	Initialize the AFCS	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 15	Prepare for Firing Using the AFCS	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 16	Conduct Fire Missions Using the AFCS	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TASK 17	Perform Direct Fire Using the AFCS	NO-GO = 0 POINTS TIME____ = ____ POINTS	
TOTAL POINTS			

## B-7. TASKS

### TASK 1

Laying a howitzer for initial direction of fire using the aiming circle. 061-266-2004

**Conditions-** Soldier is given a howitzer in the firing position with the cannon tube 50 roils off the azimuth of fire and at loading elevation (unit SOP). Bubbles will be level, and special corrections are 0. An assistant examiner will operate the aiming circle, which will be located 50 meters to the left front of the howitzer. Soldier positions himself as gunner and announces when ready. The assistant examiner commands **NUMBER 1 ADJUST, AIMING POINT THIS INSTRUMENT, DEFLECTION (XXXX)**.

**Time-** Time will start on the last digit of deflection of the initial command. Time will stop when the assistant examiner states that number 1 is laid.

### Scoring-

a. Standards of precision (B-2) were met. (If applicable.)

b. Correct steps were followed to complete the task.

c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M118A1	M198	M109s	
TIME IN SECONDS					POINTS
-29	-29	-29	-34	-29	4
30-34	30-34	30-34	35-39	30-34	3
35-39	35-39	35-39	40-45	35-39	2
40-50	40-50	40-50	45-50	40-50	1
51-	51-	51-	51-	51-	0

**Score Example:** (M101A1 howitzer) If the soldier performs Task 1 in 29.59 seconds, he scores 4 points. If the soldier performs Task 1 in 50.59 seconds, he scores 1 point.

**TASK 2**

Lay a howitzer for initial direction of fire using the M2 compass. 061-266-2003

**Conditions-** The soldier is given a howitzer in the firing position. The cannon tube is 50 roils off the azimuth of fire and at loading elevation (unit SOP). Bubbles will be level and special corrections at 0. An assistant examiner will be at the M2 compass located 10 meters to the left front of the howitzer. The soldier positions himself as the gunner and announces when ready. The assistant examiner commands **NUMBER 1 ADJUST, AIMING POINT THIS INSTRUMENT, DEFLECTION (XXXX)**.

**Time-** Time will start on the last digit of the deflection of the initial command. Time will stop when the assistant examiner announces that number 1 is laid.

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-17	-17	-17	-22	-17	4
18-20	18-20	18-20	23-25	18-20	3
21-23	21-23	21-23	26-28	21-23	2
24-25	24-25	24-25	29-30	24-25	1
26-	26-	26-	31-	26-	0

**TASK 3**

Lay a howitzer for initial direction of fire using a distant aiming point. 061-266-2003

**Conditions-** Soldier is given a howitzer in firing position with the cannon tube 50 roils off the azimuth of fire and at loading elevation (unit SOP). Bubbles will be level and special corrections at 0 The soldier positions himself as gunner and announces when ready. The examiner commands **NUMBER 1 ADJUST, AIMING POINT (NAME OF OBJECT AND LOCATION), DEFLECTION (XXXX).**

**Time-** Time will start on the last digit of the deflection of the initial command. Time will stop when the examiner states that number 1 is laid.

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-17	-17	-17	-22	-17	4
18-20	18-20	18-20	23-25	18-20	3
21-23	21-23	21-23	26-28	21-23	2
24-25	24-25	24-25	29-30	24-25	1
26-	26-	26-	31-	26-	0

TASK 4

Laying another howitzer reciprocally. 061-266-2002

**Conditions**— The soldier is given a howitzer in the firing position and already laid for initial direction of tire. Bubbles will be level and special corrections at 0. The pantel will be 50 mils off the howitzer to be laid. An assistant examiner will act as the gunner of the howitzer to be laid. The soldier positions himself as gunner and states when ready. The examiner will say BEGIN.

**Time**– Time will start when the examiner says BEGIN. The time will stop when the gunner says NUMBER 2 IS LAID.

Scoring-

- a. Standards of precision (B-2) were met. (If applicable.)
- b. Correct steps were followed to complete the task.
- c. If steps a and b were not followed, soldier recieves a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-12	-12	-12	-12	-12	4
13-15	13-15	13-15	13-15	13-15	3
16-18	16-18	16-18	16-18	16-18	2
19-20	19-20	19-20	19-20	19-20	1
21-	21-	21-	21-	21-	0



**TASK 5**

Refer the piece. 061-266-2231

**Conditions-** The soldier is given a howitzer in the firing position that has already been laid for initial direction of fire. Bubbles will be level and special corrections at 0. The pantel will be oriented on the collimator. An assistant examiner will be operating the aiming circle 50 meters to the howitzer's left front. The soldier positions himself as the gunner and announces when ready, The assistant examiner commands **NUMBER 1 REFER, AIMING POINT THIS INSTRUMENT.**

**Time-** Time will start on the word refer. Time will stop when the last digit of deflection is announced.

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-12	-12	-12	-12	-12	4
13-15	13-15	13-15	13-15	13-15	3
16-18	16-18	16-18	16-18	16-18	2
19-20	19-20	19-20	19-20	19-20	1
21-	21-	21-	21-	21-	0

**TASK 6**

Aligning the collimator. 061-266-2000, 061-266-2001

**Conditions-** The soldier is given a howitzer in the firing position that has already been laid on the initial direction of fire. Bubbles will be level and special corrections on 0. An assistant examiner will be posted at the collimator, 4-15 meters off the howitzer's left front. The collimator will be on the tripod but will not be sighted in on the panel and will not have its legs sandbagged. The soldier positions himself as gunner and announces when ready. The examiner will say **BEGIN**.

**Time-** Time will start when the examiner says **BEGIN**. Time will stop when the gunner states that the collimator is set.

**Scoring-**

a. Standards of precision (B-2) were met. (If applicable.)

b. Correct steps were followed to complete the task.

c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-17	-17	-17	-22	-17	4
18-20	18-20	18-20	23-25	18-20	3
21-23	21-23	21-23	26-28	21-23	2
24-25	24-25	24-25	29-30	24-25	1
26-	26-	26-	31-	26-	0

## TASK 7

Aligning the aiming posts. 061-266-2000, 061-266-2001

**Conditions-** The soldier is given a howitzer in the firing position that has already been laid on the initial direction of fire. Bubbles will be level and special corrections on O. The pantel will be oriented on the collimator. Aiming posts will be emplaced in the ground at 50 and 100 meters from the howitzer, but will not be aligned. An assistant examiner will be posted at the far aiming post. The soldier will position himself as gunner and announce when ready. The examiner will say **BEGIN**.

**Time-** The time will start when the examiner says **BEGIN**. The time will stop when the gunner states that the aiming posts are set.

## Scoring-

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-17	-17	-17	-22	-17	4
18-20	18-20	18-20	23-25	18-20	3
21-23	21-23	21-23	26-28	21-23	2
24-25	24-25	24-25	29-30	24-25	1
26-	26-	26-	31-	26-	0

TASK 8

Boresight the howitzer.

TASK 8A

Boresighting the howitzer (pantel) with the test target.

**Conditions-** The soldier is given a howitzer in the tiring position. Bubbles will be level and special corrections on 0. The pantel will be 10 mils off the test target, and the cover of the detent shaft will be on. The cannon tube will be aligned on the test target, which will be posted 50 meters in front of the howitzer. Boresight will be off by 5 mils and the soldier will be provided with the tools needed to make corrections to the sight. The soldier positions himself as gunner and states when ready. The examiner will say **BEGIN**.

**Time-** The time will start when the examiner says **BEGIN** and will stop when the gunner states that the howitzer is boresighted.

Scoring-

- a. Standards of precision (B-2) were met. (If applicable.)
- b. Correct steps were followed to complete the task.
- c. If steps a and b were not followed, soldier recieves a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M109s	
TIME IN SECONDS			POINTS
-45	-45	-45	4
46-60	46-60	46-60	3
61-89	61-89	61-89	2
90-120	90-120	90-120	1
121-	121-	121-	0

**TASK 8B**

Boresighting the howitzer (elbow telescope) with the test target. 061-266-2005

**Conditions-** The soldier is given a howitzer in the firing position. The cannon tube is aligned on the test target but the elbow telescope is not aligned on the test target. The test target will be located 50 meters in front of the howitzer, and the soldier will be given the tools needed to adjust the sight. The soldier will position himself as the gunner and announce when ready. The examiner will say **BEGIN**.

**Time-** The time will start when the examiner says **BEGIN** and will end when the gunner states that the howitzer is boresighted.

**Scoring-**

a. Standards of precision (B-2) were met. (If applicable.)

b. Correct steps were followed to complete the task.

c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M109s	
TIME IN SECONDS			POINTS
-45	-45	-45	4
46-60	46-60	46-60	3
61-89	61-89	61-89	2
90-120	90-120	90-120	1
121-	121-	121-	0

# TASK 8C

Boresighting the howitzer (pantel) using a DAP. 061-266-2005

**Conditions-** The soldier will be given a howitzer in the firing position. Bubbles will be level and special corrections on 0. The cannon tube will be aligned on the DAP, but the pantel will be aligned 10 mils off the DAP. Boresight will be 5 mils off, and the cover will be on the detent shaft (if applicable). The soldier will be given the tools needed to adjust the sight. The soldier positions himself and announces when ready. The examiner will say **BEGIN**.

**Time-** The time will start when the examiner says **BEGIN**, and will stop when the gunner states that the howitzer is boresighted.

## Scoring-

- Standards of precision (B-2) were met. (If applicable.)
- Correct steps were followed to complete the task.
- If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-45	-45	-45	-45	-45	4
46-60	46-60	46-60	46-60	46-60	3
61-89	61-89	61-89	61-89	61-89	2
90-120	90-120	90-120	90-120	90-120	1
121-	121-	121-	121-	121-	0

**TASK 8D**

Boresight the howitzer (elbow telescope) using a DAP.

**Conditions**– The soldier will be given a howitzer in the firing position. The cannon tube will be aligned on the DAP, but the elbow telescope will not be aligned on the DAP. The soldier will be provided with the tools needed to adjust the sight. The soldier positions himself as assistant gunner and announces when ready. The examiner will say BEGIN.

**Time**– The time will start when the examiner says BEGIN, and will stop when the assistant gunner states that the howitzer is boresighted.

**Scoring-**

a. Standards of precision (B-2) were met. (If applicable.)

b. Correct steps were followed to complete the task.

c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M198	M109s	
TIME IN SECONDS				POINTS
-45	-45	-45	-45	4
46-60	46-60	46-60	46-60	3
61-89	61-89	61-89	61-89	2
90-120	90-120	90-120	90-120	1
121-	121-	121-	121-	0

**TASK 8E**

Boresighting the howitzer (pantel) using standard angle.

**Conditions-** The soldier is given a howitzer in the firing position which has level bubbles and special corrections on 0. The cannon tube will be at 0 mils elevation. A parallex shield, screwdrivers, and a standard angle deflection and elevation will be provided. The soldier positions himself as gunner and announces when ready. The examiner will say **BEGIN**.

**Time-** The time will start when the examiner says **BEGIN**, and stop when the gunner states that the howitzer is boresighted.

<b>M101A1</b>	
<b>TIME IN SECONDS</b>	<b>POINTS</b>
-45	4
46-60	3
61-89	2
90-120	1
121-	0

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps **a** and **b** were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps **a** and **b**, use the chart below to determine score.

<b>GO</b>	<b>NO-GO</b>



**TASK 9**

Verifying boresight with the M140/M139 alignment device.  
061-266-2239

**Conditions-** The soldier is given a howitzer in the firing position, with level bubbles and special corrections on 0. The cannon tube will be set at 0 mils elevation, and the azimuth counter will be set at 1600. The soldier will be provided with an M 140/M139 alignment device. The soldier positions himself as gunner and announces when ready. The examiner will say **BEGIN**.

**Time-** The time will start when the examiner says **BEGIN**, and will stop when the gunner states that boresight is either verified or not verified.

**Scoring-**

a. Standards of precision (B-2) were met. (If applicable.)

b. Correct steps were followed to complete the task.

c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M102	M119A1	M198	M109s	
TIME IN SECONDS				POINTS
-17	-17	-17	-17	4
18-20	18-20	18-20	18-20	3
21-23	21-23	21-23	21-23	2
24-25	24-25	24-25	24-25	1
26-	26-	26-	26-	0

**TASK 10**

Fire missions (the missions in task 10 are one continuous mission).

**TASK 10A**

**Conditions-** The soldier is given a howitzer in the firing position. The howitzer is laid and both the collimator and aiming posts are emplaced. The pantel is aligned on the collimator, bubbles are level, and special corrections are at 0. The cannon tube is oriented on the primary direction of fire and elevated to 315 mils. The soldier positions himself as gunner and announces when ready. The examiner commands **FIRE MISSION, PLATOON ADJUST, NUMBER 1, 1 ROUND, SHELL HE, CHARGE (XX), FUZE QUICK, DEFLECTION 3225 (M101A1 USE DEFLECTION 2825), QUADRANT 315.**

**Time-** The time will start on the last digit of the deflection and will stop when the gunner says **READY.**

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-10	-10	-10	-10	-8	4
11-12	11-12	11-12	11-12	9-10	3
13-14	13-14	13-14	13-14	11-12	2
15-16	15-16	15-16	15-16	13-14	1
17-	17-	17-	17-	15-	0

**TASK 10B**

**Conditions-** Continuation from 10A. Soldier announces when ready. The examiner commands **SPECIAL CORRECTIONS, RIGHT 4, DEFLECTION 3194 (M101A1 USE DEFLECTION 2794), QUADRANT 315.**

**Time-** The time will start on the last digit of deflection and will stop when the gunner states **READY.**

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-11	-11	-11	-11	-9	4
12-13	12-13	12-13	12-13	10-11	3
14-15	14-15	14-15	14-15	12-13	2
16-17	16-17	16-17	16-17	14-15	1
18-	18-	18-	18-	16-	0

TASK 10C

**Conditions-** Continuation from 10B. Soldier announces when ready. The examiner cancels special corrections, says that the collimator has fallen down and directs the gunner to use the aiming posts. The examiner commands **DEFLECTION 3180 (M101A1 USE DEFLECTION 2780), QUADRANT 315.**

**Time-** The time will start on the last digit of deflection and will stop when the gunner states **READY.**

Scoring-

- a. Standards of precision (B-2) were met. (If applicable.)
- b. Correct steps were followed to complete the task.
- c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-12	-12	-14	-14	-10	4
13-14	13-14	15-16	15-16	11-12	3
15-16	15-16	17-18	17-18	13-14	2
17-18	17-18	19-20	19-20	15-16	1
19-	19-	21-	21-	17-	0

# **TASK 10 D**

**Conditions-** Continuation from 10C. Soldier announces when ready. The examiner commands **DEFLECTION 3230 (M101A1 USE DEFLECTION 2830), QUADRANT 315.**

**Time-** The time will start on the last digit of deflection and will stop when the gunner states **READY.**

## **Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-11	-11	-11	-11	-9	4
12-13	12-13	12-13	12-13	10-11	3
14-15	14-15	14-15	14-15	12-13	2
16-17	16-17	16-17	16-17	14-15	1
18-	18-	18-	18-	16-	0

**TASK 10E**

**Conditions-** Continuation from 10D. The soldier announces when ready. The examiner commands **GAS (waits for the soldier to mask)**, **DEFLECTION 3242 (M101A1 use deflection 2842)**, **QUADRANT 315**.

**Time-** The time starts on the last digit of deflection and stops when the gunner states **READY**.

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-11	-11	-11	-11	-9	4
12-13	12-13	12-13	12-13	10-11	3
14-15	14-15	14-15	14-15	12-13	2
16-17	16-17	16-17	16-17	14-15	1
18-	18-	18-	18-	16-	0

**TASK 11**

Direct fire. 061-266-2235

The fire mission in task 11 is one continuous mission. The central or reticle method of sighting may be used. Only the one man/one sight technique of direct fire will be used.

**TASK 11A**

**Conditions-** The soldier is given a howitzer in the firing position. The howitzer is laid and the panel is oriented on the collimator. Bubbles are level and special corrections at 0. The cannon tube is at 0 mils elevation and is oriented so that the trails will not have to be shifted during the mission to engage the direct fire target. The soldier will be told which direct fire target he is to engage. The soldier positions himself as gunner and announces when ready. The examiner commands **FIRE MISSION, TARGET THAT (XXX), (direction), SHELL HE, CHARGE (XX), FUZE QUICK, LEAD RIGHT 15 MILS, RANGE 600, FIRE AT WILL.**

**Time-** The time will start when the examiner states **FIRE AT WILL** and will stop when the gunner says **FIRE**.

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-11	-11	-11	-11	-9	4
12-13	12-13	12-13	12-13	10-11	3
14-15	14-15	14-15	14-15	12-13	2
16-17	16-17	16-17	16-17	14-15	1
18-	18-	18-	18-	16-	0

TASK IIB

**Conditions-** Continuation from 11A. Soldier announces when ready. The examiner commands **RIGHT 5, ADD 100**.

**Time-** The time will start when the examiner states **ADD 100** and will stop when the gunner says **FIRE**.

Scoring-

- a. Standards of precision (B-2) were met. (If applicable.)
- b. Correct steps were followed to complete the task.
- c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-6	-6	-6	-6	-4	4
7-8	7-8	7-8	7-8	5-6	3
9-10	9-10	9-10	9-10	7-8	2
11-12	11-12	11-12	11-12	9-10	1
13-	13-	13-	13-	11-	0



**TASK IIC**

**Conditions-** Continuation of task IIB. The soldier announces when ready. The examiner commands **LEFT 10, ADD 100**.

**Time-** The time starts when the examiner states **ADD 100** and stops when the gunner states **FIRE**.

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-6	-6	-6	-6	-4	4
7-8	7-8	7-8	7-8	5-6	3
9-10	9-10	9-10	9-10	7-8	2
11-12	11-12	11-12	11-12	9-10	1
13-	13-	13-	13-	11-	0

TASK 11D

**Conditions**– Continuation from task 11C. The soldier announces when ready. The examiner commands **LEFT 15, DROP 100**.

**Time**- The time will start when the examiner states **DROP 100** and will stop when the gunner states **FIRE**.

Scoring-

- a. Standards of precision (B-2) were met. (If applicable.)
- b. Correct steps were followed to complete the task.
- c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-6	-6	-6	-6	-4	4
7-8	7-8	7-8	7-8	5-6	3
9-10	9-10	9-10	9-10	7-8	2
11-12	11-12	11-12	11-12	9-10	1
13-	13-	13-	13-	11-	0

**TASK 12**

Lay a howitzer for quadrant with the range quadrant.

**Conditions-** The soldier is given a howitzer in the firing position with the cannon tube at 0 mils elevation. Bubbles will be level and special corrections at 0 mils. The soldier positions himself as assistant gunner/gunner and announces when ready. The examiner commands **QUADRANT 215**.

**Time-** The time will start when the examiner states **QUADRANT 215** and will stop when the assistant gunner/gunner states **SET**.

**Scoring-**

a. Standards of precision (B-2) were met. (If applicable.)

b. Correct steps were followed to complete the task.

c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-9	-9	-9	-9	-8	4
10-11	10-11	10-11	10-11	9-10	3
12-13	12-13	12-13	12-13	11-12	2
14-15	14-15	14-15	14-15	13-14	1
16-	16-	16-	16-	15-	0

**TASK 13**

Measure the quadrant using the range quadrant.

**Conditions-** The soldier is given a howitzer in the firing position, with the cannon tube at 245 mils. The range quadrant is at 0 mils and the cross level bubble is centered. The soldier positions himself as the assistant gunner/gunner and announces when ready. The examiner states **BEGIN**.

**Time-** The time will start when the examiner states **BEGIN** and will stop when the assistant gunner/gunner states **QUADRANT 245**.

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

M101A1	M102	M119A1	M198	M109s	
TIME IN SECONDS					POINTS
-9	-9	-9	-9	-8	4
10-11	10-11	10-11	10-11	9-10	3
12-13	12-13	12-13	12-13	11-12	2
14-15	14-15	14-15	14-15	13-14	1
16-	16-	16-	16-	15-	0

**TASK 14**

Initialize the AFCS.

**Conditions-** The soldier is given a howitzer parked within 1 meter of a survey control point (SCP). The soldier will receive data for the SCP and initialization data. The soldier positions himself as chief of section and announce when ready. The examiner will state **BEGIN**.

**Time-** The time starts when the examiner states **BEGIN** and stops when the soldier announces **INITIALIZED**.

<b>M109A6</b>	
<b>TIME IN MINUTES</b>	<b>POINTS</b>
-7	4
8-13	3
14-15	2
16-17	1
18-	0

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps **a** and **b** were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps **a** and **b**, use the chart below to determine score.

<b>GO</b>	<b>NO-GO</b>

**TASK 15**

Prepare for firing using the AFCS.

**Conditions-** The soldier is given a howitzer, aligned along the azimuth of fire, and in travel lock. The “Emplace” screen is displayed on the AFCS. The soldier positions himself as the chief of section and announces when ready. The examiner will state **BEGIN**.

**Time-** The time will start when the examiner states **BEGIN** and will stop when the soldier sends the updated piece status.

M109A6	
TIME IN MINUTES	POINTS
-1:30	4
1:31-1:45	3
1:46-1:55	2
1:56-2:10	1
2:11-	0

**Scoring-**

a. Standards of precision (B-2) were met. (If applicable.)

b. Correct steps were followed to complete the task.

c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

**TASK 16**

Conduct a fire mission using the AFCS.

**Conditions-** The soldier is given a howitzer at loading elevation. The soldier positions himself as the chief of section and announces when ready. The examiner has a digital call for fire transmitted to the AFCS.

**Time-** The time starts when the fire mission is received at the AFCS and stops when the howitzer is laid on the target.

<b>M109A6</b>	
<b>TIME IN SECONDS</b>	<b>POINTS</b>
-15.0	4
15.1-16.0	3
16.1-20.0	2
20.1-22.0	1
22.1-	0

**Scoring-**

**a.** Standards of precision (B-2) were met. (If applicable.)

**b.** Correct steps were followed to complete the task.

**c.** If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

<b>GO</b>	<b>NO-GO</b>

TASK 17

Perform direct fire using the AFCS.

**Conditions-** The soldier is given a howitzer, aligned on the azimuth of fire, and out of travel lock. The soldier is shown which target he is to engage and an assistant examiner will be provided to lay for deflection. The soldier positions himself as the chief of section and announces when ready. The examiner will state **BEGIN**.

**Time-** The time will start when the examiner says **BEGIN** and will stop when the soldier states **SET**.

M109A6	
TIME IN SECONDS	POINTS
-20.0	4
20.1-22.0	3
22.1-23.0	2
23.1-30.0	1
30.1-	0

Scoring-

- a. Standards of precision (B-2) were met. (If applicable.)
- b. Correct steps were followed to complete the task.
- c. If steps a and b were not followed, soldier receives a NO-GO and 0 points. If soldier received a GO on steps a and b, use the chart below to determine score.

GO	NO-GO

